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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,678	01/18/2002	James W. Moore	5557.P007	5448

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EXAMINER

SANDERS, ALLYSON N

ART UNIT PAPER NUMBER

2876

DATE MAILED: 03/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,678

Applicant(s)

MOORE ET AL.

Examiner

Allyson N Sanders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-28 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 10-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 14, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Bjorner et al (5,923,017).

Regarding claim 1, a method, comprising: receiving a trigger signal communicated from a triggering device in response to a location of a component in an automated identification system; capturing multiple images of at least a portion of a surface of the component in response to the trigger signal, the multiple images comprising a series of images including a first image and at least one subsequent image; and processing the multiple images to identify and read a symbol code, if any, contained within at least one or a combination of two or more of the multiple images is disclosed.

Bjorner et al teaches the following in regards to claims 1-3, 14 and 15:

"Systems have been developed for storing video images of selected portions of parcels traveling of a conveyor. For example, Kizu et al., U.S. Pat. No. 4,516,265, describes a two camera system that reads the postal (zip) codes on envelopes traveling on an envelope transport system. The system includes a low resolution prescanner that coarsely scans the surface of the envelope. The position of the destination address block is determined from the coarse scan, and the coordinates of the destination address block with respect to the leading edge of the envelope are then passed to a second, high-resolution camera system. The second camera system stores an image of the destination address block by first detecting the leading edge of the envelope. The second camera system begins storing an image of the destination address block when the block reaches the second camera, and stops storing the image when the block moves past the second camera. A postal code reader subsequently processes the high-resolution scan to read the postal code." (Col. 2, lines 40-58).

"Another example is disclosed in the commonly owned U.S. patent application, Ser. No. 08/536,512, entitled "Two Camera System for Locating and Storing Indicia on Conveyed Items." This application describes a two camera system that reads the destination addresses on parcels traveling on a conveyor. A fluorescent ink fiduciary mark is superimposed relative to the destination address on a parcel. A first camera captures an image of the fiduciary mark, the position and orientation of which is ascertained. The position and orientation of the fiduciary mark is then used to extract an image of the destination address from a video data signal created by a second

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camera, which is positioned downstream from the first camera. The image of the destination address is stored in a computer memory for subsequent processing by a character recognition system." (Col. 2 and 3, 59-6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorner et al (5,923,017) in view of Moed et al (5,770,841).

Bjorner et al's teachings are discussed above.

Bjorner et al fails to teach the following: a visual rendering of the first image or that of at least one subsequent image on the display, a user-specified delay with a defined duration preceding capturing the first image, capturing each successive image in the series of images following a user-specified interval having a defined duration, the defined duration of the user-specified interval being equal to zero, and lastly, the defined duration of the user-specified interval corresponding to each successive image in the series of images being identical.

Regarding claim 4, the method of claim 1, further comprising transmitting an output to a couple display to enable generation of a visual rendering of the first image or that at least one subsequent image on the display is disclosed.

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Moed et al teaches the following in regards to claim 4:

"If the decoded address is invalid, an image of the address is displayed on an image display workstation, and an operator enters the correct destination address. The symbol data and destination address are combined to form a unified package record, which may be used to sort and track the package. The unified package record may be stored in a database or printed on a label and affixed to the package." (Col. 2, lines 41-48).

"More particularly described, the label decoding system of the present invention includes an image display workstation." (Col. 17-18).

Regarding claim 5, the method of claim 1, wherein a user-specified delay precedes capturing the first image, the user-specified delay having a defined duration is disclosed.

"The packages are separated by a device known as a singulator. A suitable singulator is described in U.S. Pat. No. 5,372,238 to Bonnet, entitled 'Method and Apparatus for Singularizing Objects.'" (Col. 6, lines 16-19).

"The conveyor belt 18 includes a belt encoder 44 that is used to determine the speed and position the associated conveyor belt." (Col. 6, lines 20-22). Singulators separate packages and delay each package for reading until the preceding package has been read.

Regarding claim 6, the method of claim 1, wherein capturing each successive image in the series of images follows a user-specified interval having a defined duration is disclosed.

“The conveyor belt system is used to transport packages through a terminal facility. In the preferred system 10, the conveyor belt 18 is 16 inches wide and carries up to 3,600 packages per hour while moving at a rate of up to 100 feet per minute. The packages 20a-c vary in height and may be arbitrarily oriented on the conveyor belt 18. The conveyor belt 18 moves each package beneath the fiducial mark detector 24 and high resolution camera 16 in single file, and with some amount of space between them.” (Col. 6, lines 8-16).

Regarding claim 7, the method of claim 6, wherein the defined duration of the user-specified interval equals zero is disclosed.

See Moed et al's teachings in regards to claim 6. Packages can flow at a constant speed.

Regarding claim 8, the method of claim 6, wherein the defined duration of the user-specified interval corresponding to each successive image in the series of images is identical is disclosed.

See Moed et al's teachings in regards to claim 6. Packages can flow at a constant speed.

Regarding claim 9, the method of claim 6, wherein the defined duration of the user-specified interval corresponding to each successive image in the series of images is distinct is disclosed.

See Moed et al's teaching in regards to claim 5. The singulators separate packages and delay each package for reading until the preceding package has been read.

In view of Moed et al's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the display and the user-specified intervals taught by Moed et al to the teachings of Bjorner et al. One would be motivated to do so in order to eliminate the problem of packages traveling along a conveyor belt too quickly and not being able to be clearly decoded. Both the display and the user-specified intervals help to avoid this problem.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bjorner et al (5,923,017) in view of Thomas et al (4,689,490).

Bjorner et al's teachings are discussed above.

Bjorner et al fails to specifically teach the image sensor being a semiconductor image sensor.

Thomas et al teaches the following in regards to claim 17:

"An installation for the automatic reading of information applied on a code carrier on movable objects, especially on piece goods, by means of an image converter connected to an evaluation system; the code carrier arranged on the object is thereby moved through the pick-up field of the image converter in any desired angular- and width-position as well as, within a limited area of any desired height- and inclination-position; a linear semiconductor sensor with a large number of photoelements is provided as image converter in a narrow line-shaped pick-up field extending transversely to the movement direction of the object while the code carrier has an optically active coating." (Abstract).

In view of Thomas et al's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the semiconductor sensor taught by Thomas et al to the teachings of Bjorner et al. Using a semiconductor sensor is very well known in the art. It would simply be a matter of design choice as to choosing which type of sensor to use.

Allowable Subject Matter

6. Claims 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's for allowance: Although Bjorner et al and Moed et al in combination teach method of capturing multiple images of packages moving along a conveyer belt, the above identified prior art of record, taken alone, or in combination with any other prior art, fails to teach or fairly suggest the specific features of the present claimed invention, such as capturing at least one of the multiple images via an external camera including configuring the image system to receive an input from the external camera via switching to the external camera in response to user-specified criteria, the user-specified criteria including an image-capture-quantity and a time parameter, and capturing at least one of the multiple images via an external camera further including configuring the image system to receive an input from an internal image sensor via switching to the internal image sensor in response to the user-specified criteria. Moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Claims 18-28 are allowed.

The following is an examiner's for allowance: Although Bjorner et al and Moed et al in combination teach method of capturing multiple images of packages moving along a conveyer belt, the above identified prior art of record, taken alone, or in combination with any other prior art, fails to teach or fairly suggest the specific features of the present claimed invention. Specifically prior art fails to teach an article of manufacture comprising; a machine-readable medium that provides instructions, including instructions to: process a received trigger signal communicated from a triggering device in response to a location of a component in an automated identification system; capture multiple images of at least a portion of a surface of the component in response to the received trigger signal, the multiple images comprising a series of images including a first image and at least one subsequent image; store the multiple images in a memory; and process the multiple images to identify and read a symbol code, if any, contained within at least one or a combination of two or more of the multiple images. Moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Reddersen et al (6,505,778), Metlitsky et al (5,258,605), Tamburrini (5,962,838), Colley et al (6,073,849), Coleman et al (6,499,662), Shah et al (5,291,564), and Kizu et al (4,516,265).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson Sanders* whose telephone number is (703) 305-5779. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (703) 305-3503. The fax phone number for this Group is (703) 308-7722, (703) 308-7724, or (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [allyson.sanders@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



THIEN M. LE
PRIMARY EXAMINER

Allyson Sanders
Patent Examiner
Art Unit 2876
February 24, 2003